

DETAILED ACTION

This office action is in response to the amendment response filed 12/17/09. Claims 1 – 20, 33 and 35 are cancelled. Claims 21 – 32, 34, and 36 - 44 are now pending.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Stitzel on 1/26/10.

The application has been amended as follows:

**In claim 21, line 12, change “carbonate, and wherein” to - -
carbonate in a weight ratio of 1:1, and wherein - -**

**In claim 38, line 2, change “carbonate, wherein” to - - carbonate
in a weight ratio of 1:1, wherein - -**

Allowable Subject Matter

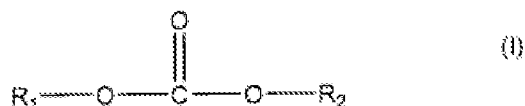
Claims 21 – 32, 34 and 36 - 44 are allowed.

The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest reference of Shingo (JP 11080418).

Applicant claims:

A process for recycling expanded polystyrene comprising:
volume reduction of expanded polystyrene by dissolution in a solution comprising a dialkyl carbonate, or a blend of dialkyl carbonates, having the following general formula (I):



wherein R₁ and R₂ are the same or different and each independently represent a linear, a branched or a cyclic alkyl radical having from 1 to 12 carbon atoms, and the sum of the carbon atoms of R₁ and R₂ is from 2 to 15;

removal of an insoluble component, if present;

selective precipitation of polystyrene with a non-solvent, wherein said selective precipitation of polystyrene is carried out at a temperature of 10-70°C, wherein the non-solvent is an alkylene carbonate, or a blend of non-solvents consisting of an alcohol and an alkylene carbonate, and wherein a weight ratio of the non-solvent to the dialkyl carbonate is from 2:1 to 20:1;

separation of precipitated polystyrene; and

drying of precipitated polystyrene.

and wherein the weight ratio of the alcohol and alkylene carbonate is 1:1.

Shingo discloses a process for recycling foamed polystyrene by dissolving it in diethyl carbonate, removing impurities, precipitating the polystyrene with alcohol as a non-solvent and stirring until the polystyrene precipitates. The polymer is separated and filtered from the mixed liquor for reuse. Shingo is silent on a weight ratio between the non-solvent and the dialkyl carbonate.

No prior art teaches or fairly suggests the claimed process of recycling expanded polystyrene by dissolving it in dialkyl carbonate and precipitating it in alkylene carbonate or a blend of alcohol and alkylene carbonate in a weight ratio of 1:1, and wherein the weight ratio of the non-solvent to the dialkyl carbonate is from 2:1 to 20:1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANCES TISCHLER whose telephone number is (571)270-5458. The examiner can normally be reached on Monday-Friday 7:30AM - 5:00 PM; off every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ling-Siu Choi/
Primary Examiner, Art Unit 1796

Frances Tischler
Examiner
Art Unit 1796

/FT/